



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2022-1401; Project Identifier AD-2022-01017-E]

RIN 2120-AA64

Airworthiness Directives; General Electric Company Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Proposed rule; withdrawal.

SUMMARY: The FAA is withdrawing a notice of proposed rulemaking (NPRM) that proposed to adopt a new airworthiness directive (AD) for certain General Electric Company (GE) CF6-80E1A2, CF6-80E1A3, CF6-80E1A4, and CF6-80E1A4/B model turbofan engines. The NPRM was prompted by a manufacturer investigation that revealed that certain compressor discharge pressure seals (CDP seals) and forward outer seals were manufactured from powder metal material suspected to contain iron inclusion. The NPRM proposed to require the replacement of the affected CDP seals and forward outer seals. Since issuance of the NPRM, the FAA has reviewed subsequent information received from the manufacturer and determined that the unsafe condition is not likely to exist or develop in other products of the same type design. Accordingly, the NPRM is withdrawn.

DATES: As of [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER], the proposed rule, which published in the *Federal Register* on November 4, 2022 (87 FR 66625), is withdrawn.

ADDRESSES:

AD Docket: You may examine the AD docket at [regulations.gov](https://www.regulations.gov) by searching for and locating Docket No.FAA-2022-1401; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD action, any comments received, and other information. The street address for Docket Operations is Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Alexei Marqueen, Aviation Safety Engineer, FAA, 2200 South 216th Street, Des Moines, WA 98198; phone: (781) 238-7178; email: alexei.t.marqueen@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued an NPRM that proposed to amend 14 CFR part 39 by adding an AD that would apply to certain GE CF6-80E1A2, CF6-80E1A3, CF6-80E1A4, and CF6-80E1A4/B model turbofan engines. The NPRM published in the *Federal Register* on November 4, 2022 (87 FR 66625). The NPRM was prompted by notification from the manufacturer of the detection of iron inclusion in a turbine disk manufactured from the same powder metal material used to manufacture certain CDP seals and a certain forward outer seal. Further investigation by the manufacturer determined that certain CDP seals and a certain forward outer seal made from billets manufactured using the same process may have reduced material properties and a lower fatigue life capability due to iron inclusion, which may cause premature fracture and uncontained failure.

The NPRM proposed to require the removal of certain CDP seals and a certain forward outer seal from service and replacement with a part eligible for installation. The proposed actions were intended to prevent fracture and uncontained failure of certain CDP seals and a certain forward outer seal, which could result in uncontained debris release, damage to the engine, and damage to the aircraft.

Actions Since the NPRM Was Issued

Since issuance of the NPRM, the FAA and the manufacturer have determined that the affected CDP seals have met their full Chapter 5 life of 15,000 cycles and are not subject to the unsafe condition. Since there is only one affected forward outer seal, identified by part number and serial number, the FAA has determined that the unsafe condition is not likely to exist or develop in other products of the same type design. Therefore, the FAA has determined that this AD action is not appropriate. However, the FAA may publish a separate rulemaking to address the unsafe condition in the specified forward outer seal.

Withdrawal of the NPRM constitutes only such action and does not preclude the FAA from further rulemaking on this issue, nor does it commit the FAA to any course of action in the future.

Comments

The FAA received comments from three commenters. The commenters were Delta Air Lines, Inc. (DAL), GE, and an anonymous commenter. The anonymous commenter supported the NPRM without change. The following presents the comments received on the NPRM and the FAA's response.

Request to Remove CDP Seals from the Proposed AD

GE requested the removal of CDP seals with part number (P/N) 1669M73P02 and serial numbers (S/N) TMT1C0E1 or TMT1C0E2 entirely from the NPRM. GE stated that this P/N has been assessed to meet its full Chapter 5 life of 15,000 cycles and, therefore, will not result in premature fracture and uncontained failure and, accordingly, no unsafe condition exists for these CDP seals.

The FAA agrees and is withdrawing the AD in response to this comment.

Request to Expand Applicability to Include Additional Engine Models

DAL requested the FAA expand the applicability of the proposed AD by adding CF6-80C2B2F/B6F/B7F/B8F model turbofan engines because the CF6-80C2 Engine Illustrated Parts Catalog identifies affected forward outer seal P/N 1778M70P03 as a part installed on those model turbofan engines. DAL stated that it is possible that parts were intermixed across models during previous engine shop visits, necessitating a review of operator CF6-80C2 fleets for the affected serial number.

The FAA disagrees. Providing both the P/N (1778M70P03) and S/N (NCU65340) of the affected forward outer seal is sufficient information to identify which engine model is affected since it is a single tracked part.

Request to Clarify Disposition of Removed Parts

DAL requested that the FAA clarify the disposition of removed parts in paragraph (g) of the proposed AD. The commenter stated that paragraph (g) of the proposed AD, Required Actions, states to remove the affected CDP seal or forward outer seal from service. DAL stated that there is no clear statement that the parts could not be returned to

service, yet further commented that paragraph (i) of the proposed AD, Installation Prohibition, ensures that the parts may not be installed. DAL commented that requiring disposal of the affected parts will ensure the parts do not enter the materials market.

The FAA disagrees. The FAA does not have the authority to require operators to discard parts to address an unsafe condition. Within the scope of an AD, removing parts from service and prohibiting installation is within the FAA's authority.

Request to Revise Definition of "Piece-Part Exposure"

DAL and GE requested that the FAA revise the definition of "piece-part exposure" in paragraph (h)(2) of the proposed AD. DAL stated that paragraph (h)(2) of the proposed AD defines piece-part exposure as when the affected part is removed from the engine. DAL suggested this be specified as removal of the affected part from the mating structures instead. The commenter reasoned that the current wording could indicate that if the module an affected part is installed in is removed from the engine, replacement of the affected part is required. GE stated that the current definition of "piece-part exposure" is unclear and suggested clarifying paragraph (h)(2) of the proposed AD to read, "For the purpose of this AD, "piece-part exposure" is when the affected part is removed from the engine and completely disassembled."

Because the FAA is withdrawing the NPRM, the clarification of paragraph (h)(2) of the proposed AD is no longer necessary.

Regulatory Findings

Since this action only withdraws an NPRM, it is neither a proposed nor a final rule. This action therefore is not covered under Executive Order 12866 or the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Withdrawal

Accordingly, the notice of proposed rulemaking, Docket No. FAA-2022-1401; Project Identifier AD-2022-01017-E which published in the *Federal Register* on

November 4, 2022 (87 FR 66625), is withdrawn.

Issued on June 8, 2023.

Michael Linegang, Acting Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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